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VASCULAR CLOSURE DEVICE USE IN HIGH BLEEDING RISK PATIENTS REDUCES PERI-PROCEDURAL COMPLICATIONS AND IMPROVES COSTS

Poster Contributions
Hall C
Sunday, March 30, 2014, 9:45 a.m.-10:30 a.m.

Session Title: Vascular Access
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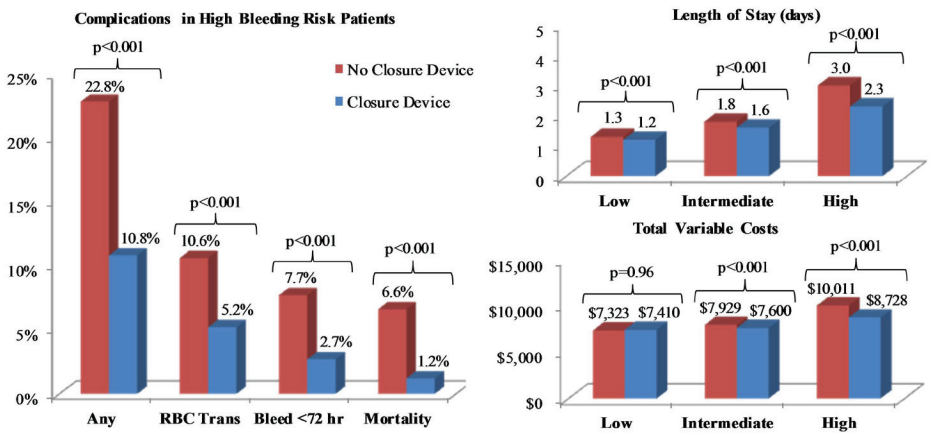
Authors: *Brandon Porten, Craig Strauss, Ross Garberich, Ivan Chavez, Jeffrey Chambers, Kenneth W. Baran, Anil Poulose, Timothy Henry, Minneapolis Heart Institute Foundation at Abbott Northwestern Hospital, Minneapolis, MN, USA*

Background: Bleeding is common in percutaneous coronary intervention (PCI) and increases length of stay (LOS), costs and mortality. Risk assessment scoring prior to PCI may enable physicians to selectively employ bleeding avoidance strategies such as vascular closure devices (VCD) to improve outcomes.

Methods: We retrospectively applied a validated pre-PCI bleeding risk score to all primary PCI cases across 3 high volume centers within a single health care system from July 2009 to August 2013. Cases were grouped as low, intermediate and high risk. Any complication, red blood cell transfusions, bleeding <72 hours, mortality, LOS and total variable costs were compared in patients with and without VCDs.

Results: Among 15,969 PCI cases, 3,523 (22.1%) were low, 8,305 (52.0%) were intermediate and 4,141 (25.9%) were high risk. One-third of low, 29.2% of intermediate and 23.0% of high risk patients received a VCD. In high risk cases, any complication, red blood cell transfusions, bleeding <72 hours, mortality, LOS and total variable costs were significantly lower with VCDs (p<0.05 for all) (Figure). No significant differences were observed in intermediate risk patients, and only any complications were lower in low risk patients (3.6% vs. 2.1%; p=0.013).



Conclusions: In high bleeding risk cases, VCD use was associated with reductions in complications, LOS and costs. A validated pre-PCI bleeding risk score provides the opportunity to selectively employ VCDs in high risk patients where the benefit may be greatest.